



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,298	03/29/2001	Juergen Bauml	LMPY-8410	6837

7590

10/16/2003

STALLMAN & POLLOCK LLP
ATTN: BRIAN J. KEATING
121 SPEAR STREET
SUITE 290
SAN FRANCISCO, CA 94105

EXAMINER

LANDAU, MATTHEW C

ART UNIT	PAPER NUMBER
----------	--------------

2815

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,298

Applicant(s)

BAUMLER, JUERGEN

Examiner

Matthew Landau

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-13,27,28,34,37 and 41-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27,28 and 41-43 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,9-13,34 and 37 is/are rejected.
- 7) ☒ Claim(s) 3 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 34 and 37 are objected to because of the following informalities: there is insufficient antecedent basis for “said support housing”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 37 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation “wherein said flange couples said blowers to said support housing only at an outer enclosure of the laser” renders the claim indefinite. It cannot be determined how coupling the blowers to the housing at the outer enclosure further structurally limits the claimed invention. It is unclear what is meant by having something coupled “at” something else. It is considered that since the outer enclosure surrounds the housing and the blowers are coupled (at least indirectly) to the housing, the blowers must be coupled to the housing at an outer enclosure.

Art Unit: 2815

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 9, 10, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted prior art.

In regards to claim 1, Figures 3, 4, and 5 of the instant application disclose a gas discharge laser, comprising: a housing 211, a first electrode 207; and second electrode 208; a second electrode support 209; a first cross-flow blower section 202 including a plurality of blades, further including a plurality of internal hubs and two end hubs, said end hubs coupling with a shaft and defining a cylindrical form extending along a cylindrical axis of the blower section; a second cross-flow blower section 203 including a plurality of blades further including two end hubs, said end hubs coupling with a shaft and defining a cylindrical form coaxial with the cylindrical form of the first cross-flow blower section; and a flange 201 having two ends, a first end indirectly coupling to the shafts of the first and second blower sections, and a second end coupling to the housing; said flange having a leading edge point and a trailing edge point with respect to a direction of gas flow.

Art Unit: 2815

In regards to claims 9 and 10, US Patent No. 5,870,420, which had been incorporated by reference into Applicant's disclosure (page 3, lines 3-6 of the instant specification), discloses blades, internal hubs, and end hubs all formed from aluminum alloy (column 2, lines 14-16). Therefore, the admitted prior art encompasses blades, internal hubs, and end hubs all formed from aluminum alloy.

In regards to claim 37, the limitation "wherein said flange is coupled to the electrode support bar" appears to be directed to a non-elected species (Figure 9 of the instant application). However, it is the position of the Examiner that the flange is coupled to the electrode support bar via the housing. Therefore, the limitation is given a broad interpretation wherein the term "coupled" is equivalent to "indirectly coupled". As best the examiner can ascertain the claimed invention, Figures 4 and 5 of the instant application disclose a laser tube filled with a gas mixture; a plurality of electrodes (207 and 208) within the discharge chamber for energizing the gas mixture, said plurality of electrodes including a pair of main discharge electrodes (207 and 208) spaced apart by a discharge volume; an optical resonator for generating a laser beam; a cross-flow blower assembly including a pair of longitudinally adjacent and coaxially disposed cylindrical cross-flow blowers (202 and 203); a flange 201 supportingly disposed between said pair of cross-flow blowers; and an electrode support bar 209 for supporting one of the main discharge electrodes (207 and 208), wherein said flange is coupled to the electrode support bar; wherein said flange couples said blowers to said support housing only at an outer enclosure of the laser.

Art Unit: 2815

6. Claims 34 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoag.

In regards to claim 34, Figures 2 and 6 of Hoag disclose a gas discharge laser, comprising; a laser tube filled with a gas mixture; a plurality of electrodes (19U and 19D) within the discharge chamber for energizing the gas mixture, said plurality of electrodes including a pair of main discharge electrodes (19U and 19D) spaced apart by a discharge volume; an optical resonator for generating a laser beam; a cross-flow blower assembly including a pair of longitudinally adjacent and coaxially disposed cylindrical cross-flow blowers (63a and 63b); a flange 65b supportingly disposed between said pair of cross-flow blowers; and an electrode support bar (short segment between 19D and part #55) for supporting one of the pair of main discharge electrodes, wherein said flange is indirectly coupled to said support housing and to said blowers, and said flange is not coupled directly to said electrode support bar.

In regards to claim 37, as best the examiner can ascertain the claimed invention, Figures 4 and 5 of the instant application disclose a laser tube filled with a gas mixture; a plurality of electrodes (19U and 19D) within the discharge chamber for energizing the gas mixture, said plurality of electrodes including a pair of main discharge electrodes (19U and 19D) spaced apart by a discharge volume; an optical resonator for generating a laser beam; a cross-flow blower assembly including a pair of longitudinally adjacent and coaxially disposed cylindrical cross-flow blowers (63a and 63b); a flange 65b supportingly disposed between said pair of cross-flow blowers; and an electrode support bar (short segment between 19D and part #55) for supporting one of the main discharge electrodes (19U and 19D), wherein said flange is coupled to the electrode support bar; wherein said flange couples said blowers to said support housing only at an outer enclosure of the laser.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 4-6, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoag in view of Hofmann.

In regards to claim 1, Figures 2 and 6 of Hoag disclose a gas discharge laser, comprising: a housing 31; a first electrode 19U; a second electrode 19D; a second electrode support (short segment between 19D and part #55); a first cross-flow blower section 63a, including a plurality of blades, further comprising two end hubs, said end hubs coupling with a shaft and defining a cylindrical form extending along a cylindrical axis of the blower section; a second cross-flow blower section 63b including a plurality of blades further including two end hubs, said end hubs coupling with a shaft and defining a cylindrical form coaxial with the cylindrical form of the first cross-flow blower section; and a flange 65b having two ends, a first end indirectly coupling to the shafts of the first and second blower sections, and a second end indirectly coupling to the housing; said flange having a leading edge point and a trailing edge point with respect to a direction of gas flow. The difference between Hoag and the claimed invention is the cross-flow blower sections including a plurality of internal hubs. Figure 2a of Hofmann discloses a cross-

Art Unit: 2815

flow blower including a plurality of internal hubs 212. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Hoag by using the internal hubs of Hofmann for the purpose of stiffening the blades (column 3, lines 18-21).

In regards to claim 2, Figure 6 of Hoag discloses said flange 65b not contacting said second electrode support (short segment between 19D and part #55).

In regards to claim 4, a further difference between Hoag and the claimed invention is the radial blades have a first radius of curvature of a top surface smaller than a second radius of curvature of a bottom surface. Figure 3c of Hofmann discloses a tangential blower with a radial blade 320 having a first radius of curvature of a top surface greater than a second radius of curvature of a bottom surface. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of Hoag by including the radial blades of Hofmann for the purpose of increasing the aerodynamic efficiency.

In regards to claim 5, a further difference between Hoag and the claimed invention is the radial blades have a cross-section shaped like an airfoil. Figure 3c of Hofmann discloses a radial blade 320 with a cross-section shaped like an airfoil. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of Hoag by including the radial blades of Hofmann for the purpose of increasing the aerodynamic efficiency.

In regards to claim 6, a further difference between Hoag and the claimed invention is the inner and outer surfaces of the blades have different radii of curvature. Figure 3c of Hofmann discloses a radial blade 320 wherein the inner and outer surfaces of the blade have different radii

Art Unit: 2815

of curvature. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention Hoag by including the radial blades of Hofmann for the purpose of increasing the aerodynamic efficiency.

In regards to claims 11 and 12, a further difference between Hoag and the claimed invention is the radial blades, end hubs, and internal hubs are formed from magnesium or titanium alloy. Hofmann discloses radial blades, end hubs, and internal hubs formed from magnesium and titanium alloy (column 9, lines 30-35). In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of Hoag by using the materials of Hofmann for the purpose of selecting lightweight, durable materials.

9. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoag in view of Hofmann as applied to claim 1 above, and in further view of Immell et al. (US Pat. 6,250,886, hereinafter Immell).

In regards to claim 13, a further difference between Hoag and the claimed invention is the radial blades, end hubs, and internal hubs are formed from steel. Immell discloses a fan with radial blades constructed from steel (column 4, lines 22-25). In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of Hoag by using steel for the blower components for the purpose of selecting a durable material.

Allowable Subject Matter

10. Claims 27, 28, and 41-41 are allowed.
11. Claims 3 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. The indicated allowability of claims 1, 34, and 37 is withdrawn in view of the newly presented rejections, which include a new interpretation of the previously presented references.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (703) 305-4396.

The examiner can normally be reached from 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Art Unit: 2815

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Matthew C. Landau

Examiner

October 13, 2003

A handwritten signature in black ink, appearing to be 'J. Jackson', written in a cursive style.

**JEROME JACKSON
PRIMARY EXAMINER**